

Project proposal to study the social value and impact of Private Mobile Radio (PMR)

Introduction

Private Mobile Radio (PMR) is a radio service used for the self-provision of mobile communications facilities within organisations. A PMR system is one where the purpose and the exclusive benefit of use of the radio system is solely in the interests of the Licensee's business.

PMR is widely used in the UK by a number of different industry sectors. Historically it was mainly used to provide wide area voice communications to large and small fleets of vehicles. In recent years this has changed dramatically. While there are still a great number of wide area analogue speech only applications there has been a huge growth in other types of systems. In general there has been a large increase in the provision of data services of all types. There are also many on-site systems providing both voice and data to small campuses and within buildings.

Proposal for study

The RA has a need to understand the social impact of PMR in the UK. There is no existing benchmark by which the social value and impact of PMR to its users is measured. It is considered to be a low cost part of the infrastructure of many organisations. In numerous cases the core functions of an organisation are entirely dependent on the availability of secure, reliable mobile communications.

Aim of the study

The aim of proposed study is to examine the effect of PMR on the UK from the point of view of the services that it provides and the social consequences that potential new measures like spectrum trading or auctioning might have upon it.

A detailed study of this subject has not recently been conducted and assumptions on issues such as efficient use of spectrum for mobile communications are usually made with regard to parameters drawn from the example of commercial cellular services. This has created a sense within industry that there is a general bias against self provided services. Considerable studies have been conducted or are in hand regarding the economic impact of radio services on business. However it is clear that this is not a fully adequate method of evaluating the role that private mobile communications plays in the life of the nation and therefore the impact that changes to the regulatory system may have.

It is necessary to consider a number of other factors when evaluating the value of this radio service.

Issues to be considered

PMR is used as a tool within organisations for their own communications purposes and should be considered differently from commercial communications provision. To

certain sectors an equivalent service could not easily be provided by a commercial service provided. The main factors that set it apart are security, network control, dedicated traffic capacity and cost.

Security and availability

This applies in a number of respects. There are PMR systems that carry information that is very sensitive and its integrity is of paramount importance. To these and other users the availability of the network is a related key issue as is its resilience in conditions when other services are knocked out or otherwise unavailable (inclement weather, disasters or difficult terrain or when other networks are overloaded by traffic demand).

Network Control

For certain users having control of the network is a matter of importance. This may be for a variety of reasons; to give flexibility of operation, to provide a guaranteed quality of service, for security reasons or to cut costs.

Dedicated traffic capacity

There are a number of organisations that run their own communications systems because commercial providers cannot provide the necessary capacity for their applications in the areas where it is needed and at times when it is needed. These users require a dedicated quality of service.

Costs

Cost is a factor that plays a role in all decisions about the implementation of mobile communications systems. PMR is widely used by small business to provide mobile communications. It is the backbone of taxi services where it is almost universally used for dispatching. There is a sector of PMR users that, were costs to become too high (comparable with the costs of public access services), might no longer be able to use mobile communications at all. This includes charities and the voluntary sector, public bodies and other groups involved in the community and small businesses.

The task

The project will study and report on the social value and impact of PMR on UK considering all areas of PMR use including transport provision, private industry, the public sector and voluntary organisations.

The project should consider why PMR is used to provide mobile communications in an organisation and the changing factors affecting future choices including all the factors given in this proposal.

It must consider the growing popularity of new features offered by mobile communications and the impact that these measures are having on working practice and human behaviour. These features include the wider use of positioning, vehicle tracking, lone worker safety features, remote data delivery, home working options, tagging of property and people as well as traditional speech communications.

It must also consider the consequences of potential future rises in licence fees, The introduction of spectrum trading and the availability of alternative technology.